CHAPTER 7

TRI-SAR HARNESS ASSEMBLY FLOATATION VEST, P/N 487VB, FOR SEARCH AND RESCUE OPERATIONS

7-1. GENERAL.

7-2. The TRI-SAR Harness Assembly Floatation Vest, P/N 487VB, is a removable component of the TRI-SAR Harness Assembly, P/N 487. Information regarding configuration, application and function of the TRI-SAR Harness Assembly For Search and Rescue Operations is contained in NAVAIR 13-1-6.5, Rescue and Survival Equipment Manual.

7-3. MAINTENANCE.

7-4. Maintenance of the Floatation Vest shall be accomplished at the Intermediate Level of maintenance.

7-5. INSPECTION. The TRI-SAR Harness Assembly Floatation Vest, P/N 487VB, is subject to Place-In-Service, Preflight, and 90-Day Special Inspections.

7-6. A Place-In-Service Inspection shall be performed on the Floatation Vest prior to placing in service and a Special Inspection shall be performed once every 90 days. A Functional Test shall be performed prior to placing in service, and every fourth inspection cycle thereafter, and whenever an inflation assembly is replaced. A Leakage Test shall be performed during every inspection cycle. Upon completion of inspection, make necessary entries on appropriate forms in accordance with OPNAVINST 4790.2 series.

7-7. Place-In-Service Inspection. A Place-In-Service Inspection shall be performed prior to placing in service. The Place-In-Service Inspection consists of the following:

NOTE

Failure of the Floatation Vest during any portion of the Place-In-Service Inspection renders the vest non-RFI and must be reported in accordance with OPNAVINST 4790.2 series.

1. Inspect inflation assembly for corrosion, damaged threads, and ease of operation. Operate lever several times to ensure it moves freely.

2. Inspect pull toggle and lanyard for damage.

NOTE

Bladder is entirely encased and cannot be inspected or removed. Inspection is limited to a visual inspection and an inflation test.

A 1-inch bar tacking is located at the bottom of each lobe. This is to prevent excessive loading of internal bladder during over-inflation, which in time could cause bladder leakage. Bar tacking may become loose or have broken stitches. Inspect bar tacking in accordance with paragraph 7-9.

3. Inspect Floatation Vest casing for cuts, tears, deterioration, abrasion, stains, and general cleanliness.

4. Perform a Functional Test in accordance with paragraph 7-10.

7-8. Preflight Inspection. The Preflight Inspection requirements are identified in NAVAIR 13-1-6.5.

7-9. 90-Day Special Inspection. A Functional Test shall be performed every fourth inspection. The 90-Day Special Inspection shall consist of the following:

NOTE

The floatation bladder is entirely encased and cannot be inspected or removed. Any damage other than minor damage to hook and pile tape and replacement of inflation assembly or check valve assembly shall render the floatation assembly non-RFI and it shall be replaced.

1. Inspect inflation assembly for corrosion, damaged threads, and ease of operation. Operate lever several times to ensure it moves freely.

2. Inspect beaded handle and lanyard for damage.

3. Inspect oral inflation tube for cracks, security, ease of operation, and corrosion.

4. Inspect Floatation Vest casing for cuts, tears, deterioration, abrasion, stains, and general cleanliness.

4A. Inspect 1-inch bar tacking for loose or broken stitches on casing lower lobes. Using a standard ruler, measure bar tacking. Remaining intact bar tacking shall not be less than 3/8 inches. If tacking measures under 3/8 inch, contact Life Savings Systems Corp (813) 645-2748, 220 Elsberry Road, Apollo Beach, FL 33572-2289 for turn-in and repair instructions.

5. Inspect survival item pockets for loose or damaged hook and pile tape. Repair hook and pile tape by over-stitching along the original seam line with Size E, Nylon Thread V-T-295, six to eight stitches per inch.

6. Perform Functional or Leakage Test as required.

7-10. Functional Test. A Functional Test shall be performed at the Place-In-Service Inspection, every fourth inspection cycle, and each time the inflation assembly or check valve assembly is removed or replaced. To perform the Functional Test, proceed as follows:

Materials Required

Quantity	Description	Reference Number
1	Cylinder, CO_2, Type II	MIL-C-25369C NIIN 00-543-6693

1. Install CO_2 cylinder and actuate inflation assembly by pulling on the pull toggle.

2. The Floatation Vest shall fully inflate to design shape, without evidence of restriction, in less than 30 seconds.

3. If preserver does not properly inflate, inspect inflation assembly and repair as necessary.

NOTE

For Place-In-Service Inspection, if vest does not properly inflate, deflate vest and report discrepancy in accordance with OPNAVINST 4790.2 series.

3. Deflate vest in accordance with paragraph 7-12.

4. Perform Leakage Test in accordance with paragraph 7-11.

7-11. Leakage Test. The Floatation Vest is subject to Leakage Test after every Functional Test and 90-Day Special Inspection. To perform the Leakage Test, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Inflation Assembly (Note 1)	487-1-3
As Required	Valve, Pneumatic Inflator (Check Valve) (Note 2)	8457500047
As Required	Kit, Gasket	105AS100-5 NIIN-00-498-6964
As Required	Leak Detection Compound	MIL-L-25567 NIIN 00-186-2963

Notes: 1. Inflation assembly must be open purchased from the following source:
Life Saving Systems Corp,
220 Elsberry Road,
Apollo Beach, FL 33572-2289
Phone (813) 645-2748.

2. Pneumatic inflator check valve must be open purchased from the following source:
Schrader-Bridgeport Intl.
205 Frazier Rd,
P.O. Box 668, Altivista, VA 24517
Phone (804) 369-8826.

CAUTION

Ensure test area is free of foreign objects.

1. Ensure all carbon dioxide has been removed from life preservers that have been functionally tested.

CAUTION

Do not over-inflate bladder. Over-inflation can cause damage to bladder along with excessive stress and ripping of bar tacking on lower casing lobes.

NOTE

You may use either the test fixture identified in Chapter 3 or use standard shop procedures to inflate and deflate life preserver.

2. Depress mouthpiece button to open oral inflation valve and inflate vest to 2.0 psig. Release mouthpiece button and close oral inflation valve.

3. After a minimum of 15 minutes, re-check pressure and, if necessary, re-adjust test pressure to 2.0 psig. Ensure oral inflation valve is closed and record time.

4. Record temperature and barometric pressure as required.

5. After a minimum of 2 hours, record test pressure. Test pressure must not drop below 1.8 psig after 2 hours.

6. If pressure of vest is below 1.8 psig, re-inflate to 2.0 psig and coat inflation assembly with a leak detection compound or a soap solution. If leakage is detected coming from the inflation assembly, inspect check valve and replace as necessary in accordance with paragraph 7-13. If leakage is detected at any other location on Floatation Vest, replace Floatation Vest and perform Place-In-Service Inspection.

7. Deflate the Floatation Vest in accordance with paragraph 7-12.

8. Install a Type II CO_2 cylinder in accordance with paragraph 7-14.

9. Snap beaded handle to Floatation Vest.

10. Safety wire inflation assembly in accordance with paragraph 7-15.

11. Secure velcro tape on both sides of Floatation Vest.

12. Make necessary entries on appropriate forms in accordance with OPNAVINST 4790.2 series.

7-12. DEFLATION. To deflate the Floatation Vest, proceed as follows:

Support Equipment Required

Quantity	Description	Reference Number
1	Pump, Rotary Vacuum (or equivalent)	NIIN 00-052-5015 (90567)
As Required	Hose, 3/8- or 1/2-inch Inside Diameter, Rubber	—

1. Attach one end of rubber hose to vacuum pump.

2. Deflate through oral inflation valve. Hold in open position, and hold vacuum pump hose in hand against end of oral inflation valve and press valve button. When compartment is collapsed, release button on oral inflation valve. Screw lock closed.

7-13. REPLACEMENT OF CHECK VALVE ASSEMBLY. To replace a defective check valve assembly, proceed as follows:

Materials Required

Quantity	Description	Reference Number
1	Valve, Pneumatic Inflator (Check Valve Assembly) (Note 1)	Schrader-Bridgeport P/N 8457500047

Notes: 1. Schrader-Bridgeport P/N 8457500047 must be open purchased from:
Schrader-Bridgeport Intl
205 Frazier Rd
P.O. Box 668
Altivista, VA 24517
Phone (804) 369-8875

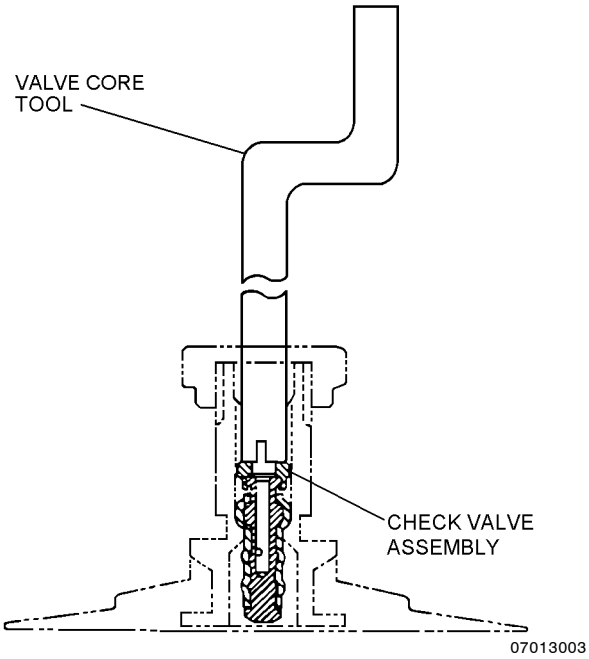
Support Equipment Required

Quantity	Description	Reference Number
1	Tool, Valve Core	8769A or equivalent (CAGE 27783) NIIN 01-354-5423
1	Wrench, Torque	—

1. If not available, fabricate a valve core tool as shown in Chapter 3.

2. Remove inflator cap nut.

3. Insert valve core tool and unscrew check valve from valve stem.



Step 3 - Para 7-13

4. Insert new check valve in valve stem and tighten with valve core tool hand tight.

5. Replace cap nut and torque to a value of 8 ±1 in-lb.

6. Perform Functional and Leakage Tests in accordance with paragraphs 7-10 and 7-11.

7-14. INSTALLATION OF CO_2 CYLINDER. To install cylinder, proceed as follows:

Materials Required

Quantity	Description	Reference Number
1	Kit, Gasket	105AS100-5 (CAGE 30003) NIIN 00-498-6964
1	Cylinder, CO_2 Type II	MIL-C-25369C NIIN 00-543-6693

Support Equipment Required

Quantity	Description	Reference Number
1	Scale (Gram)	A-A-52021-1 NIIN 00-514-4117 or equivalent
1	Die, Cylinder Thread Chaser	1842-008-01 (CAGE 03688) NIIN 00-069-4040

NOTE

Weight of charged cylinder will vary according to manufacturer.

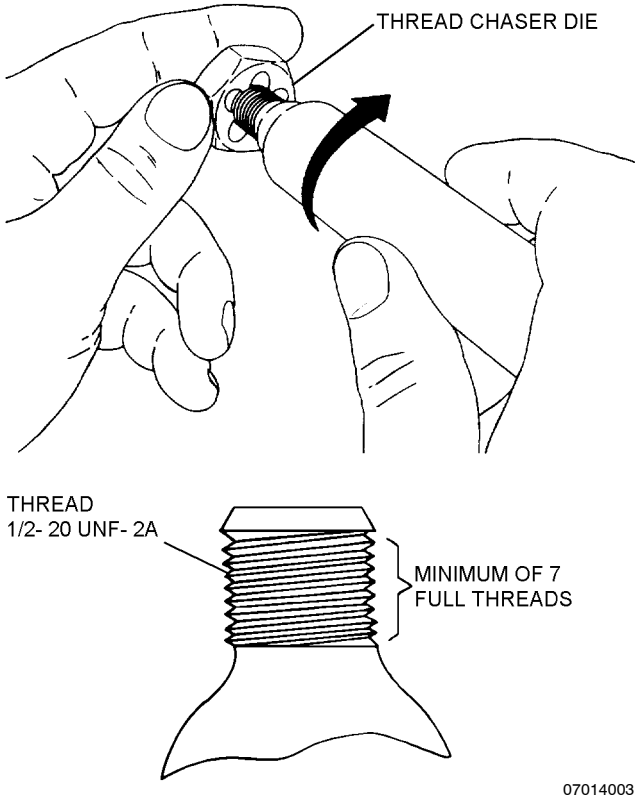
1. Weigh a charged cylinder and compare the minimum stamped weight with the scale weight. Discard and replace cylinder if scale weight is 2 grams less than minimum stamped weight.

2. Ensure that inflator lever is in a closed position.

CAUTION

Steel threads on CO_2 cylinder can cause damage to aluminum threads on inflator if cylinder is not carefully threaded. If binding occurs during installation of cylinder, use thread chaser die on cylinder thread to cut free excessive plating. Reinstall cylinder. If binding still occurs, replace cylinder.

3. To assure a firm cylinder seat, conduct a cylinder thread count. Threaded portion of cylinder neck shall contain a minimum of seven full threads to assure a firm cylinder seat within valve body. Any cylinder found with less than seven full threads shall be discarded.



Step 3 - Para 7-14

4. After performing Functional Test, insert a new seat seal gasket from kit. At intermediate inspection intervals, inspect condition of gasket and replace if necessary.

5. Install CO_2 cylinder into inflator body as far as hand twisting will permit.

NOTE

When replacing CO_2 cylinder, ensure that CO_2 cylinder passes through the holding loop.

6. Safety-wire inflator as required in accordance with paragraph 7-15.

7. Secure inflation valve protective cover.

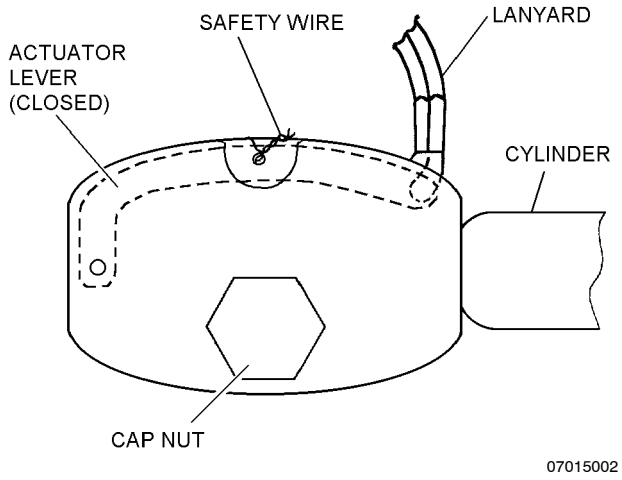
7-15. SAFETY-WIRING. To safety-wire the inflation assembly, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Copper Wire, Uncoated, Type S, 0.0159-inch Diameter	QQ-W-343 NIIN 00-236-9501

1. Pass a single strand of uncoated, 0.0159-inch Type S copper wire through hole in inflation assembly body and through hole in actuation lever.

2. Twist the wire a minimum of four times and trim the excess.



Step 2 - Para 7-15

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